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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/486,744 | 03/01/2000 | YVES TROUILHET | AD6530 | 9833 |

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| EXAMINER |
|---|
| HON, SOW FUN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1772 | 5 |

DATE MAILED: 12/20/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-5

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/486,744 | TROUILHET, YVES | |
| | Examiner | Art Unit | |
| | Sow-Fun Hon | 1772 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the term "adjacent" means that the opposing surfaces are in contact.

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what the unit parameters of $cc/m^2$ d atm and $g/m^2$ d represent. Do they represent the respective permeabilities of cubic centimeters of gas per squared meter per day per atmosphere, and grams of gas per squared meter per day?

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the entire packaging material as claimed in independent claim 1 has the claimed barrier properties, or representative of the barrier materials themselves, in which case claim 1 should be rewritten to specify as such.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-4, 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al. (US 4,551,366) in view of Parks et al. (EP 0520767A1).

Maruhashi et al. has a flexible gas barrier plastic material on a paper substrate (column 1, lines 1-35). The cup paper has a basis weight of 50 to 400 g/m$^2$ (column 4, lines 45-50). The adhesive for bonding the paper substrate to the plastic is taught to be graft-copolymerized maleic anhydride modified ethylene-vinyl acetate copolymer (column 5, lines 15-35). The gas barrier blend layer of ethylene-vinyl ester is taught to contain nylons such as nylon 6 (polyamide 6), nylon 46 and nylon 610 and blends thereof (column 8, lines 1-30). A specific blend of nylon 6 and nylon 66 with a weight ratio from 99/1 to 70/30 as the polyamide is taught (column 8, lines 65-70 and column 9, lines 1-5), but the crystallinity and basis weight are not taught. Maruhashi et al., also fails to teach the basis weight of the adhesive layer of maleic anhydride modified ethylene-vinyl acetate.

Parks et al. has a paperboard laminate wherein an embodiment shows a sandwich structure of tie layer/amorphous nylon/tie layer coextruded onto the inner surface of the paperboard (column 3, lines 15-20). Parks et al. teaches that the tie layer is an anhydride modified ethylene acrylate with a basis weight of 3.2 to 13 g/m$^2$ (column 4, lines 45-60). Parks et al. teaches that amorphous nylon is preferred due to its being suitable for coextrusion coating (column 4, lines 35-45) and that the basis weight is 6.5 to 60 g/m$^2$ (4-12 lbs/ream). Parks et al. teaches that nylon 6 and nylon 66 are individually unsuitable (column 4, lines 4, lines 40-45), suggesting to one of ordinary skill in the art that the crystallinity should be disrupted by blending with the amorphous nylon for a desired variation in physical properties. It is the

examiner's position that the claimed oxygen and water permeability barrier properties of the respective barrier materials are well known in the art.

Because Parks et al. teaches that amorphous nylon is preferred for coextrusion coating, it would have been obvious to one of ordinary skill in the art to have used the amorphous nylon of Parks et al. in the invention of Maruhashi et al. in order to obtain a packaging material with good coextrusion properties.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi et al. in view of Parks et al. as applied to claims 1-4, 6-7 above, and further in view of Zabrocki (US 4,883,837).

Zabrocki has adhesives which have unexpected synergistic increase in strength values over those of the individual components and yet are coextrudable (column 9, lines 30-60). The adhesive blends comprise from about 20 to about 80 weight percent thermoplastic polyurethane and from about 5 to about 50 weight percent of modified polyolefin (column 3, lines 40-45) wherein the modified polyolefin is taught to be graft olefin copolymers, a specific example being a maleic anhydride grafted ethylene/vinyl acetate copolymer blend (column 11, lines 1-30).

Because Zabrocki teaches that the adhesive blends have unexpected synergistic strength values, it would have been obvious to one of ordinary skill in the art to have used the adhesive blends of Zabrocki in place of the adhesive in the invention of Maruhashi et al. in order to obtain a barrier laminate with improved interlaminar adhesive layer strength.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH
12/13/01

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

12/15/01